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ABSTRACT

This paper describes the value of life change as a nonintellectual predictor of college grades. A correlation was sought between the amount of change experienced and grade point average (GPA) accumulated by students during their freshman year. Three hundred freshmen were evenly divided into low, medium, and high academic risk groups as indicated by college entrance examinations. Fisher's t test on life change totals revealed that low GPA subjects in each group had experienced significantly greater amounts of change. Significance levels were .05 for the low risk group and .01 for the medium and high risk groups. These results indicate that life change warrants additional study and holds promise of being a nonintellectual variable with which to supplement existing methods of predicting college grades. (Author)

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CHANGE AND "ACADEMIC ILLNESS": SOME IMPLICATIONS FOR THE PREDICTION OF COLLEGE GRADES

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Toffler, in Future Shock, warns that man must consider the psychological consequences when he experiences high degrees of change. Overstimulation, resulting from bombardment of the senses by rapid change, may interfere with one's ability to think or perform tasks requiring cognitive skills (Toffler, 1970). For example, the amount of life change experienced by college students, especially freshmen, may be a determining factor in how well they perform academically. Evidence has been found which indicates that students whose college year has been marked by great and rapid change tend to reflect the strain through poor grades.

In recent years, Dr. Thomas H. Holmes and associates at the University of Washington have studied the effects of change on man. The efforts of these researchers have yielded evidence of the interrelatedness of life change and human proneness to illness, depression, and injury. Such conditions tend to result when change presses man beyond certain "stress limits." Life events have been found to cluster significantly preceding ailments such as tuberculosis, heart disease, skin disease, and hernia. In 1967, a study was conducted among 2500 officers and enlisted men aboard three U.S. Navy cruisers to determine the impact of life change on health. Prior to embarking on a cruise,

CG 008 655

the men reported life changes occurring to them during the preceding six month period. Those reporting the most change were classified as a "high risk" group while the remainder were designated as "medium" and "low risk" groups as indicated by change experienced. In the first month of the cruise, the high risk group consistently reported more illness each month for the six month cruise period and had a third more illnesses over the follow-up period than did the low risk group (Holmes, 1970).

In a similar study, life change data was gathered on 100 college football players for the year prior to football season. Once again, high, medium, and low risk designations were made. When evaluated at the end of the football season, 50 percent of the high risk group had been injured, as were 25 percent of the medium risk group, and 9 percent of the low risk group. Of the ten players who sustained multiple injuries during the season, seven were in the high risk group (Holmes, 1972).

The research of Constantini and associates at the University of Connecticut has also revealed interesting conclusions. Here, magnitude of life change has been found to have significant positive correlations with tension, depression, anger, fatigue, and other mood states occurring in college students (Constantini, 1972).

If the stress of life change can trigger such powerful physiological and emotional reactions, it might also be reasonable to assume that change could manifest itself in other ways. The study described herein was undertaken on the premise

that, among college freshmen, excessive life change might also elicit a type of "academic illness" characterized by low grades. Determining the value of life change as a non-intellectual variable for the prediction of academic success was the goal of the study.

Procedure and Findings

Instrumentation for the collection of data for this study evolved in a three-step procedure. Originally, a device called the Social Readjustment Rating Scale (SRRS) was developed by Holmes and Rahe in 1967. The SRRS is a self-report questionnaire for quantifying the psychological magnitude of life change experiences in a given time period (Holmes, 1970).

The researchers compiled an extensive list of common life events, only some of which were negative or "stressful" in the conventional sense. Many events listed were of a positive, socially desirable nature. However, Holmes and Rahe sought not only to compile a list of the life events which commonly occur to man, but also to rank order these events according to their impact. A sample composed of 394 subjects from the general population was asked to scale the events listed. The first item on the list, marriage, was arbitrarily assigned a value of five hundred. Participants were requested to assign a numerical value to each of the remaining items in proportion to that set for marriage. The value of an item was determined by the evaluator's perception of the intensity of and amount of time required for readjustment to that life event.

In this manner, the original instrument, the SRRS, was developed (Holmes, 1970).

In a variation of the SRRS, Holmes, et al., developed the Social and Athletic Readjustment Rating Scale (SARRS). The purpose of the SARRS was to evaluate life change and injuries in college athletes. Of the forty-two original items on the SRRS, thirty-eight were retained in the new scale. Two items were revised and three, which obviously did not apply, were deleted. A new modulus item, entering college, replaced marriage and was assigned a value of five hundred. Following the procedure of the original study, eighty college athletes (ages 18 to 22) were asked to scale the events listed. Spearman's rank order correlation coefficient was high (0.84) for the thirty-eight items common to both scaling attempts (Holmes, 1970).

A special measuring instrument, the Social and Collegiate Readjustment Rating Scale (SCRRS), was developed in order to gather life change data for this study. The instrument is a modified version of the SRRS and, to a greater extent, the SARRS.

The SARRS was standardized on a sample of college football players ranging from eighteen to twenty-two years of age. Revision of certain SARRS items was necessary in order to develop an instrument which would not only be more applicable to the general student population, but would also require less effort to administer. At the outset, eight SARRS items were deleted for this purpose, leaving forty-nine items, thirty-nine of which remain unchanged in the SCRRS. In six SARRS items, semantic

maneuvers such as substitution of the term "academic" for "athletic" were used to make the SCRRS applicable to females and male non-athletes as well.

A panel of six college students presided over the revision of four additional SARRS items. These items dealt primarily with problems emanating from members of the athletic staff (head coach, assistant coach, and so forth). From a list of campus officials, excluding members of the athletic staff, judges selected persons (dean of men, instructors, and others) to be substituted for the athletic staff positions used in each of the four items. For each item, judges were instructed to select the campus official whom they perceived to be just as important to the general student population as the specified athletic staff member would be to an athlete.

In this manner, every effort was made so as not to alter the established values of those items converted. The final product, the SCRRS, consists of forty-nine items or life events, thirty-nine of which are common to both the SARRS and the SRRS.

Near the close of the 1972 spring semester, the SCRRS was administered to a sample of freshmen at East Texas State University, Commerce, Texas. The sample consisted of three groups of one hundred students each. One group was composed of students whose American College Test (ACT) and College Entrance Examination Board (CEEB) composite scores indicated a high degree of college readiness. Academically, this group represented a "low risk" segment of the population. A second

group consisted of students whose ACT composite scores designated them as being at a medium level in both college readiness and academic risk. The ACT composite scores of the third group indicated a low level of college readiness and, consequently, a high academic risk.

Through use of the SCRRS, a life change score was tabulated for each student for the calendar year preceding the study. After semester grades were recorded, each group of one hundred was ranked according to grade point average (GPA). Fisher's *t* was then employed to determine if a significant relationship existed between the SCRRS scores of students with the twenty-seven highest and twenty-seven lowest grade points in each of the three groups.

The *t* ratios revealed that, within each of the three groups, subjects in the low grade point range had experienced significantly greater amounts of life change during the one year period than had those in the high grade point range. As shown in Table 1, significance at the .05 level was found for the low academic risk group while differences for the medium and high risk groups were significant at the .01 level.

Insert Table 1 about here

Discussion

For many who attend college that particular period of their lives is one accompanied by great and rapid change, especially during the freshman year. Survival of the freshman year (academically, socially, and so forth) greatly enhances one's

prospects for eventual graduation. For some freshmen, however, this survival may only be achieved to the degree to which they can cope with change, anxiety, life stress, and academic demands.

Studies dealing with college difficulty and attrition have revealed little in terms of causes or prevention. Knoell (Pervin, 1966) and others have pointed out the unrelatedness of attrition to academic ability and achievement. Accepted predictors of college performance, aptitude test scores, high school grades, and rank in high school graduating class, have proven to be of limited value.

The purpose of this study was to determine if and to what extent a relationship exists between the amount of life change encountered by college freshmen and the grades which they achieve. The results indicate that life change is indeed a factor and holds promise of being a nonintellectual variable with which to supplement the existing methods of prediction.

It was speculated that life change might be a serious detriment to high risk students but would generally become less of a factor as ability (as indicated by test composites) increased. However, data in Table 2 revealed that the impact of change, when measured in terms of GPA, was more or less constant regardless of ability level of the student involved.

Insert Table 2 about here

While data indicated a very definite, inversely proportional, relationship between life change and GPA, attention should be called to certain notable exceptions. Specifically, there

occurred isolated cases of individuals who persisted in making high grades despite having been exposed to a great amount of change. Questions remain unanswered as to what condition or combination of conditions enable that individual to "shrug off" the high rate of change and fulfill his projected expectations. Research now in progress may reveal that these individuals possess certain personality traits which account for greater resistance to the stress of life change.

In conclusion, it would seem that life change research may provide a much needed breakthrough for higher education in America. Through utilization of counselors and other competent student personnel workers, colleges may help students to not only become aware of, but also to accept, understand, and cope with life change. This is seen as a possible deterrent to attrition and poor academic achievement.

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Footnotes

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Table 1

t Ratios for Determining Differences in the Amount of Life Change Experienced by Students with High and Low Grade Point Averages within Each of the Three Academic Risk Groups

Low GPA	Mean SCRRS Score	SD	High GPA	Mean SCRRS Score	SD	*t* Ratio
Low Academic Risk	422.89	150.69	Low Academic Risk	336.93	158.11	-2.0451[a]
Medium Academic Risk	429.74	148.91	Medium Academic Risk	316.07	116.12	-3.1278[b]
High Academic Risk	443.67	157.20	High Academic Risk	340.00	97.73	-2.9101[b]

[a]Significant at .05 level

[b]Significant at .01 level

Table 2

Difference in Mean Low GPA and Mean High GPA

in Each of Three Academic Risk Groups

	Low Risk	Medium Risk	High Risk
Mean GPA--Upper 27%	3.78	3.40	2.84
Mean GPA--Lower 27%	1.99	1.61	1.13
Difference	1.79	1.79	1.71

Note—Based on maximum GPA of 4.00